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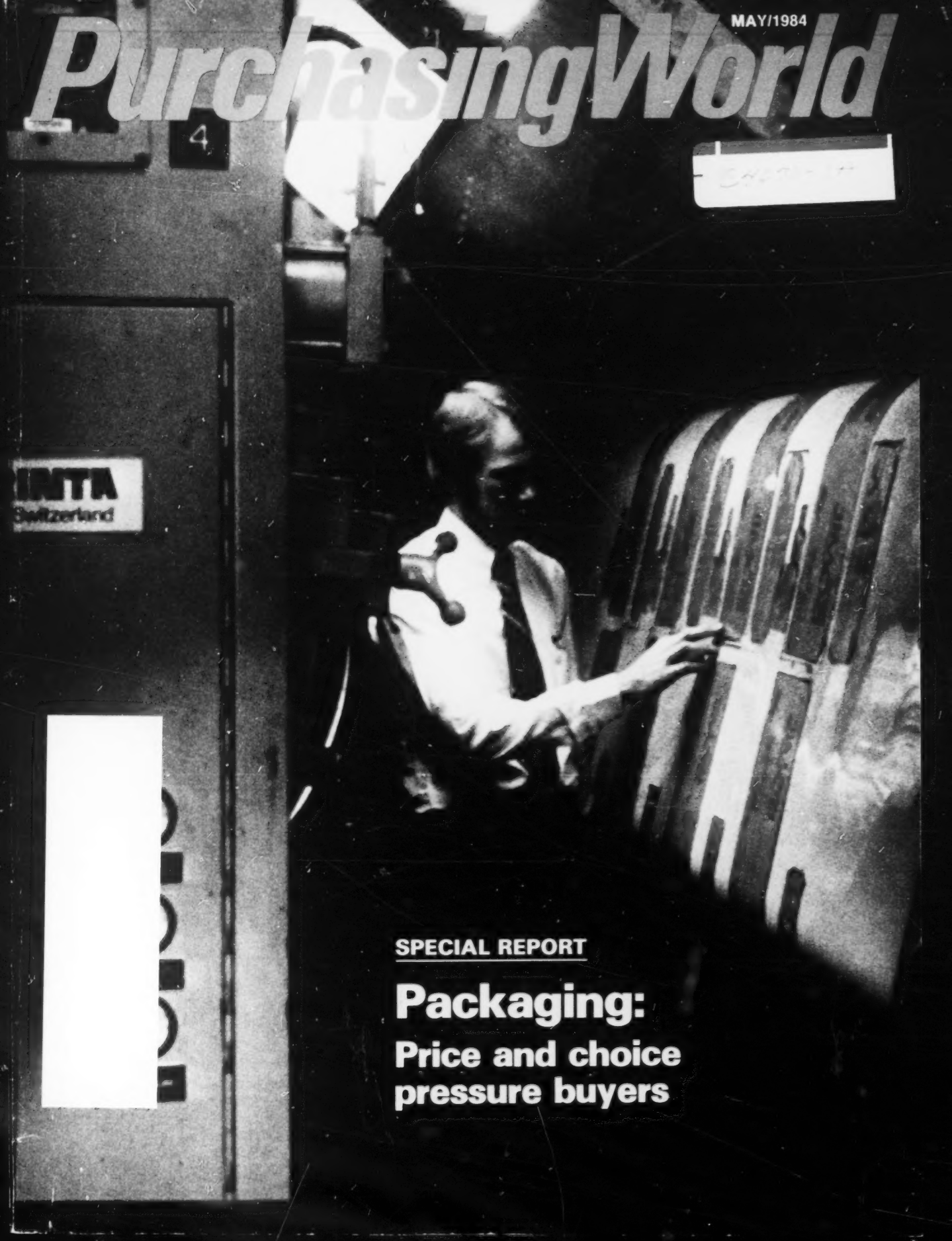

SPECIAL REPORT

Packaging:
Price and choice pressure buyers

Vol. 28, No. 5-May 1984

PurchasingWorld

Helping you manage the business of buying

Features

47 Packaging markets: purchasing feels the pressure
With price increases hitting all major packaging materials—paper, metals, glass, and plastics—and some stretchouts in delivery times occurring, the nation's packaging buyers will have their work cut out for them. That's the consensus of *PW's* most recent survey of not only buyers but also vendors and packaging consultants.

56 Packaging innovations offer more options to buyers
Lighter, stronger packaging materials and greater emphasis on graphics are making packaging materials more of a custom buy for users.

64 NAPM's new look-ahead president
Ed Todd, president-elect of the National Association of Purchasing Management, believes that you get out of an organization what you put into it. Not only has he put a lot into NAPM, but he sees a great opportunity for it in the "whole new breed of young buyers" coming into the field.

66 No surge seen for industrial prices
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82* New plant purchasing: successful kickoff
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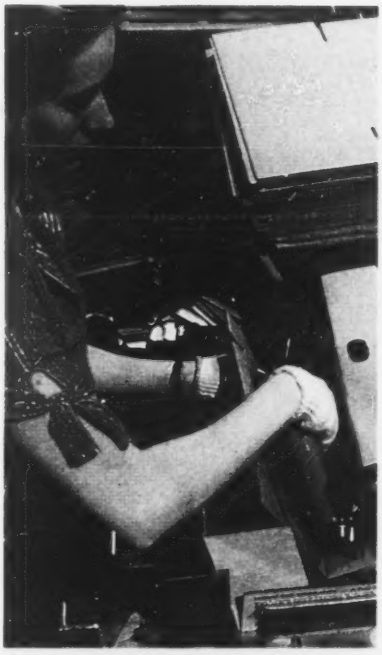

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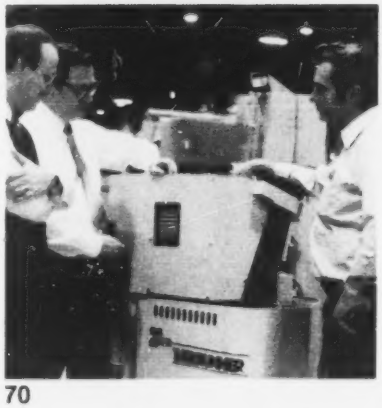

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Cover photo: courtesy of Container Corporation of America

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PW PREDICTS

Robert S. Reichard, executive editor

Fears of inflation increase

Inflation is again becoming an area of major concern. These fears are being fueled by the modest price acceleration of the past six months—at a 5% annual rate compared with 3½% during the previous six months. Confirmation comes from the fact that 50% of the purchasing executives responding to the latest NAPM business survey say they're being socked with new increases compared with only a reading of 14% just one year earlier.

Even more important, most forecasters believe the acceleration will continue. What they disagree on, however, is just how much acceleration to expect.

As might be expected, there are some purveyors of gloom and doom who insist on projecting a return to double-digit inflation. They cite: (1) the gradual rise in operating rates which could be approaching the 85% level by yearend (a point at which bottlenecks begin to appear); (2) the large growth in money supply (over the past two years it has averaged 9.5% annually—the highest 2-year period since World War II); and (3) increasing demands from labor, including attempts to recoup many of their earlier givebacks.

To be sure, all of these pressures do exist. But it's doubtful whether they signify a new runaway spiral. Indeed, there are even more impressive arguments suggesting only relatively modest price acceleration in the quarters immediately ahead.

It's hard to refute, for example, that the underlying rate of inflation (as measured by unit labor costs) has been virtually halved from the levels of a few years back. In any case, even with some acceleration (say, 2 percentage points), unit labor costs are likely to rise only about 5-6% this year.

Moreover, there are a lot of other potent price-restraining factors around: (1) rising interest rates; (2) the relatively moderate rise in volatile raw material prices; (3) expectations of basically stable oil prices for the next year or so; (4) a continuing strong dollar; (5) projections for a rather good crop year both here and abroad. Then, too, precious metal prices—a time-honored harbinger of inflation—are still depressed.

A recent survey of some 27 leading business economists supports this conclusion. On the average, they predict about a 4.9% increase in the GNP price level for the 12-month period ending fourth-quarter 1984—no analyst puts the advance above 6.5%.

Econometric models tell much the same story. A compilation of 13 of these mathematically derived forecasts projects the fourth-quarter 1983 to fourth quarter 1984 gain at 5%—with the biggest 12-month advance put at only 6.1%.

The halcyon days of 1983—when prices were stable or even falling—are over. But we should be able to get through the current year without too much damage. As for 1985, it's still too early to tell. But if output gains slow down as projected, next year, too, may not be all that bad as far as the overall price level is concerned.

Energy cost trends

Energy tags may be ready to move up a bit. But by and large, the increases will be in the tolerable range. In the oil sphere, they're likely to remain in the 3%-or-lower annual rate through mid-1985 (see chart).

At least, that's how Department of Energy analysts see it. Judging by their regular quarterly look at overall quotes, the only real problem they anticipate is in natural gas—and even then it's an "iffy" situation.

More to the point: On January 1, 1985, over 50% of the gas that is currently being produced will be exempt from federal price controls. This could conceivably make for as much as a 12% increase over the next 12 months. On the other hand, an equally convincing case can be made for excess supplies negating the impact of deregulation. The forecast shown in the chart, calling for a 6% increase, splits this difference of opinion.

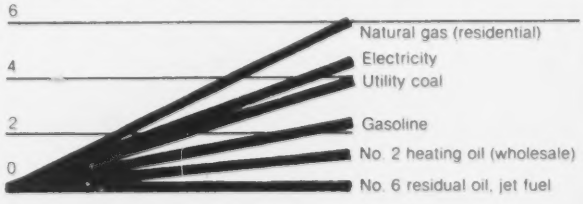
Estimates of electricity rate hikes, meantime, have been lowered from previous forecasts—with an average boost of only 4½% seen over the next year. Behind this optimism: Only modest increases are anticipated for fossil fuels—plus the fact that average capital costs are expected to be lower in 1984 than in 1983.

The fossil fuel assumption is backed up by forecasts for near-stable crude oil tags over the forecast period and a relatively modest 4% increase in coal.

That's not to say, of course, that there won't be some seasonal fluctuations. Heating oil can expect declines of 2-3% this summer. But they'll probably be offset by increases of equal magnitude by late fall or winter.

Energy tags into mid '85

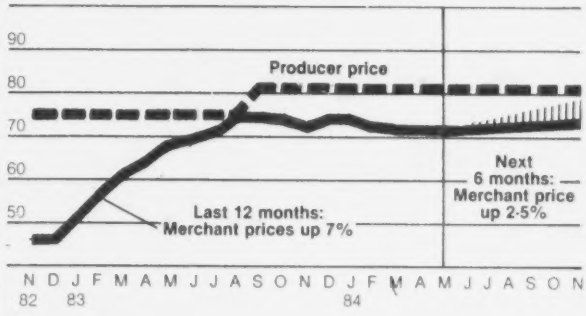
Percent change from 2nd qtr 1984 to 2nd qtr 1985



Source: Department of Energy

Aluminum ingot prices

Cents per pound


90
80
70
60
50
Producer price
Next 6 months: Merchant price up 2-5%
Last 12 months: Merchant prices up 7%
N D J F M A M J J A S O N D J F M A M J J A S O N
82 83 84

CURRENT SITUATION: The industry, buoyed by 1983's big demand and price gains, is talking in terms of another banner year. But price hikes could be somewhat more moderate. True, some fabricated items have just been bumped. But basic ingot seems to be taking a breather. While producer ingot lists continue at 81¢/lb, merchant quotes are down in the low 70s. Demand—as measured by shipments and new orders—continues at a brisk pace, though **leadtimes seem to be leveling off.**

DEMAND: Producers are quite bullish about 1984, estimating as much as a 9% shipment increase (to near 15 billion lb). Aluminum distributors are even more optimistic, expecting as much as a 15% advance in their area. Free World demand should follow suit, with about an 8% overall increase anticipated. In any event, **good gains are anticipated in the packaging, electrical, construction, and transportation sectors.**

SUPPLY: There should be enough to go around. Domestic producers have upped production to near 86% of capacity—and rates could easily by pushed further. Also suggesting optimism are (1) the expectation of increased imports (possibly to 16% of the domestic market by 1990 versus only 10% last year), (2) increasing availability of recycled metal, and (3) the announcement of new plants both in Canada and overseas. **The Canadian expansion alone is expected to push potential up some one million tons by the end of the decade.**

PRICE OUTLOOK: It should take some time for market ingot to move up to official list levels, suggesting that any new boost in the latter may not be in the offing until late in the year. Even then, increases are likely to be modest, with little more than an 85¢/lb price anticipated by this time next year. But fabricated product tags could advance at a slightly faster pace—**on the order of 6-8% at annual rate over the next few quarters.**

Steel

Scattered tightness and rising prices have replaced the glut days of less than a year ago. Items on the hard-to-get list now include cold-rolled sheet as well as coated sheet. In any event, sheet mills are operating at between 90 and 100% of capacity. Added to recovery in other areas, the situation suggests that overall 1984 steel shipments will hit 77-78 million tons—some 15% ahead of last year. Prices, meantime, continue to firm with sheet, stainless plate, tube, and structural rods all moving up in recent weeks. All told, transaction prices are already up 10% from 1983 lows—and heading still higher.

Ethylene

Second-quarter price increases are falling short of the 1.5-2¢/lb increases that producers had been shooting for. Strong competitive pressures, say buyers, have whittled the boost down to only 0.5-1¢/lb. That brings the going transaction price to only 20-20.5¢/lb—some 2.5¢/lb under official list levels.

Copper

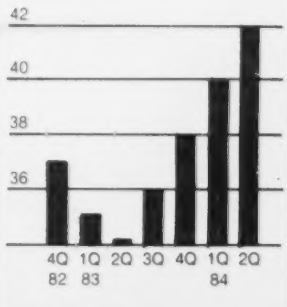
The red metal is beginning to stir. True, the price recovery is hardly spectacular—especially in view of the fact that copper was fetching 84¢/lb as recently as last May. Nevertheless, it does represent a major firming from the 64¢/lb low of a few months back. One key factor behind the firming: falling LME inventories. And here in the U.S., demand is good from both the brass mill and telecommunications sectors. In any event, the underlying trend should be up, with quotes moving up near the 85¢/lb mark by late summer or fall.

Polypropylene

Off-schedule prices are being boosted another 2¢/lb—bringing the going quote to around 42¢/lb for the general-purpose grade. But that would still be some 3¢/lb under the official list level. The immediate force behind the rise: a 2¢/lb increase in propylene, the key raw material. But good demand is another factor. The industry is said to be operating at near 90% of its potential, and very little new capacity is expected to come on stream this year. It's a situation that suggests full return to list levels sometime this summer.

Polypropylene

Market price ¢/lb

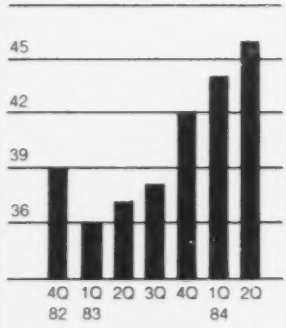


Polystyrene

A new 2¢/lb boost brings quotes back to within shouting distance of official list levels (48¢/lb for the general purpose grade and 52¢/lb for the high-impact, high-heat material). Blame the hike more on rising benzene and styrene feedstock costs than on any supply-demand imbalance. On the latter score, operating rates are still only in the mid-70s range, with an expected 5-6% increase in demand this year not expected to tax production facilities.

Polystyrene

Market price ¢/lb



Computers

There are still plenty of buys on the low end of the market. The Atari 600 XL, for example, goes for only $200—less than half last year's quote. And the Commodore 64 can be had for as little as $159, with the firm's new Commodore 16 targeted to sell for only $100. Also look for price cuts on portable computers as producers move to counter IBM's recent entry. One competing firm has already announced price cuts of up to 17%. IBM also faces increasing competition on its desktop PC as a host of other producers jump into the market offering machines at lower prices or with enhanced computing power.

Lead

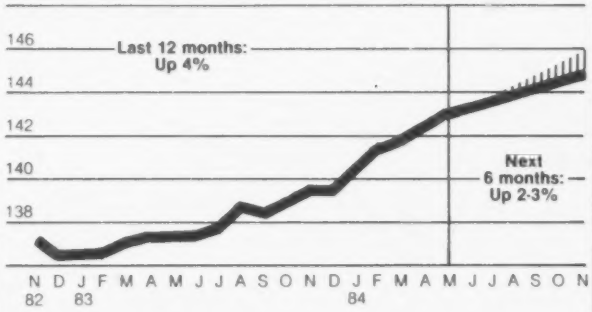
Things are beginning to look up for the heavy metal with a good chance tags could edge up another cent or so in the months immediately ahead. Upward-tugging forces would have to include (1) the recent rise in LME quotes, (2) a decline in warehouse stocks, (3) some tightness in U.S. concentrate supplies, (4) the possibility of labor troubles, and (5) increasing U.S. consumption (a 3-4% increase is projected for 1984). But despite some current snugness, no real supply problems are seen, as secondary facilities continue to operate at only around 60% of their potential.

ABS plastics

Brace for another 5¢/lb increase in lists on top of the 3¢/lb January advance. That will be enough to bring the pipe-grade resin up to 78¢/lb. Behind the boost: strong demand gains which are expected to push consumption totals up some 7-10% this year, plus recently announced boosts in acrylonitrile and butadiene—key ABS ingredients.

Textile mill product prices

Index: December 1975 = 100



CURRENT SITUATION: Bullishness is now the order of the day as orders continue to move higher. Sign of the times: Mill production at latest report was running close to 15% above early 1983 levels. **Prices, however, show surprisingly moderate advances—perhaps because of this import competition.** In any event, average quotes currently run only about 4% above a year ago. The fiber component of prices has moved up faster—**5-6% in the case of synthetics and near 15% for raw cotton.**

DEMAND: Another 5-7% gain seems likely for 1984 as a whole—given both rising consumer incomes and a strong construction market. The latter factor is quite important—tending to beef up demand not only for carpets, but also for draperies, upholstery fabrics, and bed and bath supplies. **Knitting mills, too, should be star performers.** Gains will also impact on fibers, with **some manmade fiber producers now talking in terms of an 8-10% advance this year.**

SUPPLY: Operating rates have been climbing and are now near the 90% mark. But for the most part, it's still a no-sweat situation as imports continue to come in at a recordbreaking clip. In one recent month, for example, combined incoming textile and apparel shipments ran 50% ahead of a year ago on a square yardage equivalent basis. **Also reassuring is the fact that mills have been upping their capital spending sights.** Right now, they expect to spend $1.8 billion—up a strong 28% from 1983.

PRICE OUTLOOK: Performances could vary significantly by type of material. But overall, it would be wise to budget for at least a 2-3% increase by fall—with the 1984 textile average running some 5-6% ahead of last year. Carpet averages, however, could be up in excess of 6%. **As for 1985, count on pretty much the same pattern,** though there could be some deceleration in the rate of carpet boosts, down to the 4-5% range.

Express and courier delivery services

Express delivery services are taking off, with outlays over the past six years more than doubling the $4.3 billion back in 1977 to a hefty $10.5 billion last year.

Zero in on the overnight delivery segment of this market, and the advances border on the fantastic. Figures over the same six-year period, for example, suggest more than an eightfold increase here—the equivalent of nearly a 40% annual growth rate.

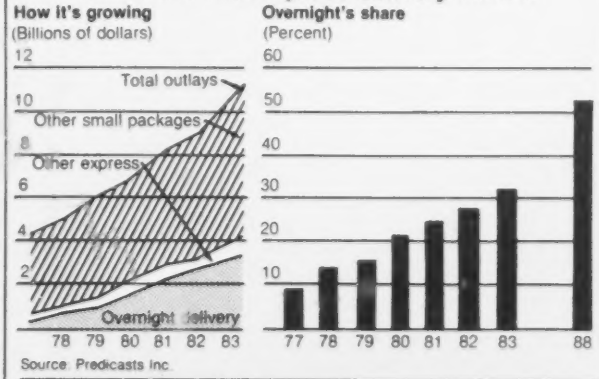
The new findings, part of a new Predicasts, Inc. study, mean that overnight deliveries now account for over 30% of the entire courier and express delivery market. That compares to only a 9% share back in 1977. Nor is that the end of the line. By 1988, for example, the Cleveland-based market research firm sees overnight services capturing close to 43% of the market.

Predicasts' analysts credit the gain to several factors—namely, the trend toward a more information-based, service-oriented economy combined with courier service innovations, aggressive marketing, clever advertising, and geographical expansion.

Another segment of the express delivery market should continue to do quite well, too. Second day delivery gains are targeted to grow at near a 25% annual rate through 1988. But a third category (other small packages—primarily United Parcel's regular service and the Postal Service's fourth class mail) is expected to grow at only a modest 4.3% annual rate over the next few years.

Equally significant, there could be a new growth area on the horizon: express truck delivery. As business turns from static warehousing to just-in-time delivery systems, tempting opportunities will arise for express deliveries via surface transportation. Established trucking firms (especially the less-than-truckload carriers) are likely candidates for entry—as are railroads seeking to broaden their service offerings.

The courier and express delivery market



Source: Predicasts Inc.

Electronic components

Count on another few months of high prices for 64K EPROMs ($8/unit in quantities of 1000). But by the fourth quarter, increasing capacity could bring quotes down by as much as 10%. The increasing supply is already having some impact on delivery times. Thus waits of 30 weeks and more last year have dropped to 20 weeks currently—and should drop even further by fall.

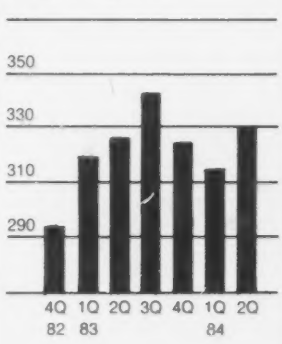
Paper

Prices remain in a strong uptrend. Newsprint (up 7%) has been added to the list of products heading higher. And the overall industry is operating at near 95% of capacity this year—versus only 89% in 1983. Other items sporting higher tags since January include coated magazine paper (up 6.5%, or $50/ton), uncoated groundwood (up 7.7%, or $70/ton), and unbleached kraft linerboard (up 10% to $320/ton). Market pulp is up even more—over 21% in the case of bleach softwood and over 17% for bleach hardwood.

Lumber

Brace for some fairly stiff price increases over the next few months, following the fractional decline during the first quarter. Indeed, given the recent strong pace of new housing starts and relatively low mill inventories, rising quotes seem all but inevitable. Averages should be up by as much as 10% by summer or early fall.

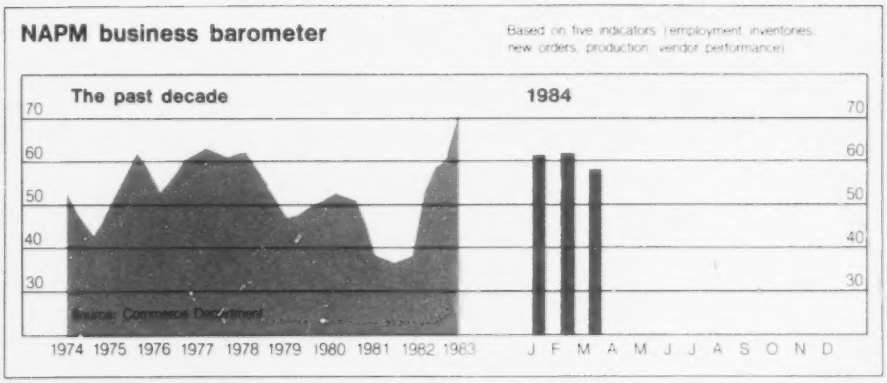
Softwood lumber 2x4's

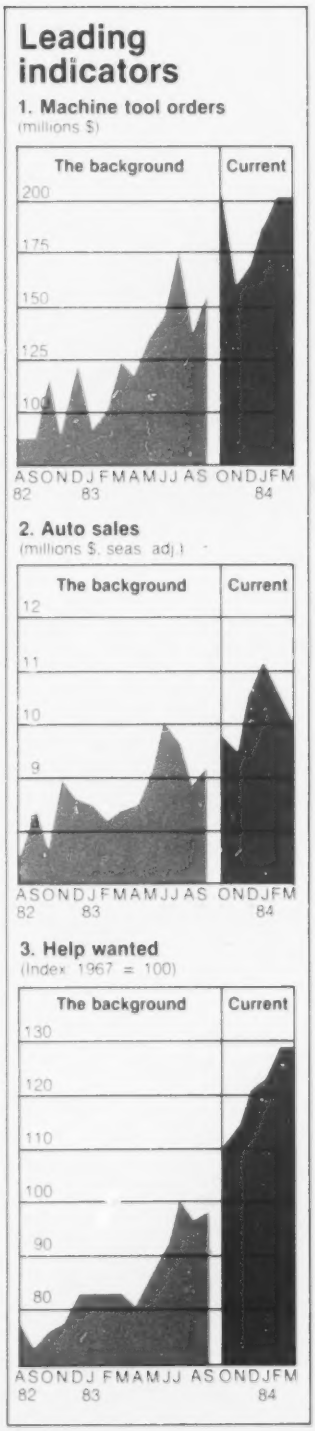


Silver

Operating forces suggest little more than backing and filling around current levels. On the upside are increasing fears of accelerating inflation, the explosive Iraq-Iran conflict, and the shaky Third World debt structure. But these are being balanced by rising interest rates and oversupply. Silver supplied to the market from new mine output and secondary sources tops demand by about 100 million ounces per year. In any case, the $13-15/oz price confidently predicted a few months ago is still nowhere in sight—certainly not as far as the current year is concerned.

BUSINESS DATATRAK


NAPM business barometer
Based on five indicators (employment, inventories, new orders, production, vendor performance)
The past decade
1984
70
60
50
40
30
Source: Commerce Department
1974 1975 1976 1977 1978 1979 1980 1981 1982 1983
J F M A M J J A S O N D



KEY ECONOMIC TRENDS

Business gains show signs of slowing

The business curve is still heading up, but gains for the most part will be somewhat less robust than those racked up over recent quarters.

Credit much of the expected moderation to the slow rise in the prime and other interest rates. On the other hand, even without this, there are now increasing signs that the big 7%-plus annual rate of growth recorded during the first three months of the year won't be repeated.

New orders, while still rising, aren't showing some of the king-sized advances of earlier months. Then there are the broad-gauge economic indicators such as the NAPM business barometer. True, this bellwether yardstick remains well above the neutral 50 level and hence is signaling continuing gains, but the trend seems to be down.

The picture is much the same if you zero in on individual sectors. Machine tool orders, for example, are high—but still do not show signs of really taking off (see chart above). As one tool maker puts it, "Sure, we're getting a lot more requests for quotes. But as yet, not too many are being translated into solid orders."

Consumer trends also suggest a temporary plateauing at high levels rather than continued acceleration. Auto sales, for example, have remained relatively unchanged in the high, 10-11 million annual-rate range since the beginning of the year (center chart).

Nor is this likely to change over the next few months. Indeed, a new Conference Board study finds that plans to buy new cars have actually dropped a bit—8.4% of the respondents currently versus the 8.8% of a month earlier. Interest in major appliances has also cooled somewhat.

In short, there are precious few signs of the economy overheating. In the words of Fed Vice Chairman Martin, "I don't think we have an overheated economy. I think we have some overheated economists."

But by the same token, he, and virtually every other analyst, agrees that the trend will still be up. Help-wanted ads continue to rise (bottom chart) suggesting that new jobs are still opening up.

And while order gains are harder to come by, they continue to exceed sales. That makes for a further rise in unfilled orders, thereby assuring continued production gains for the next few months—and probably much longer than that.

Other factors in the business-sustaining forces include (1) relatively high consumer and business confidence levels, (2) increasing use of lower-cost variable rate mortgages which will help blunt the

impact of higher interest charges, (3) continuing modest inventory rebuilding in many industries, (4) still relatively modest inflation, and (5) accelerating government spending.

Conclusion: Business gains may be slowing down, but the 1983-84 upturn still has a way to go. Best bet: about a 4% annual rate of GNP advance over the April-June period—with only a slightly lower 3% rate over both the third and fourth quarters of the year.

Fleet-car trade rates studied

The average U.S. commercial fleet car is sold after about 30 months and just over 56,000 miles, according to a new survey conducted by the National Association of Fleet Administrators. The most popular cycle for manufacturing firms is 36 months and between 55,000 and 65,000 miles.

The picture for noncommercial fleets is somewhat different, however. U.S. government and public utilities fleets, for instance, tend to drive cars 80,000 miles or more before getting rid of them. These vehicles, as might be expected, are also kept longer—71 months in the case of public utilities and 52 months in government use. Canadian vehicles on the other hand, tend to follow the U.S. commercial fleet pattern.

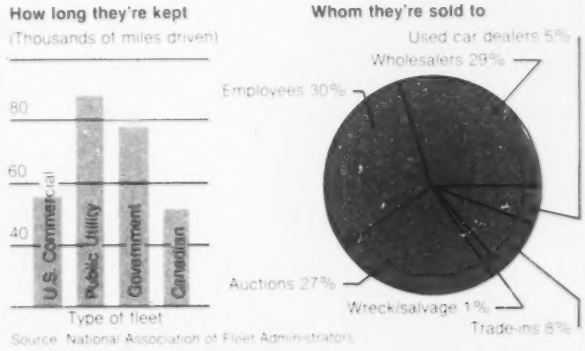
Also of interest to fleet administrators is the fact that the recent trend toward holding cars longer or driving them more intensively before turning them in may be running out of steam.

Of the 26 U.S. commercial fleets planning to change their cycle this year, some 14 say they will lengthen it (either in months or miles driven); while 12 contemplate shortening the cycle. In short, pretty much of a dead heat.

The survey also turned up a variety of disposal methods. The three most popular, in descending order of importance, were sales to employees (30% of vehicles), wholesalers (29%), and auto auctions (27%). Far down the list were trade-ins (8%), used-car dealers (5%), and wreck/salvage (1%).

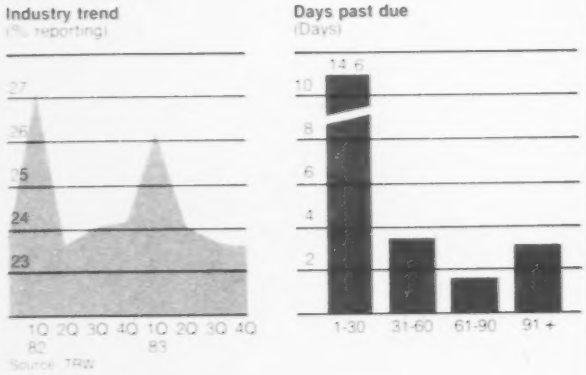
Similarly, there seems to be a wide range of methods to determine disposal price. The most popular pricing source is the Automotive Market Report (AMR) guidebook. Other approaches include the National Auto Dealers Association guidebook, market value, wholesale value, depreciated book value, Red Book, Black Book, and bids from employees.

Fleet car disposal strategies



Source: National Association of Fleet Administrators

Past due bills



Bill paying picks up

Buyers have been paying their bills a bit more promptly.

At least that's the implication of TRW's latest quarterly rundown of past-due accounts. According to the firm's Information Services Division, only 23.2% of today's procurement bills are delinquent. That's significantly under the 27.6% peak hit back in recession-ridden 1982 and the best ontime performance in nearly four years.

Equally impressive is the fact that really long overdue accounts have shown the most improvement. Bills more than 90 days in arrears, for example, have dropped from 4.4% of total billings in early 1983 to only 3.1% at latest report. The same is true of the 61-90 day overdue category, where a decline from 2.4% to 1.7% is noted over the same period.

Behind the improvement are the strengthening cash position of many firms and the drop in interest rates over the past year—something which reduces the incentive to delay payment.

On the latter score, TRW analysts note an excellent correlation between the prime rate and delinquencies, with the percentage of overdue bills rising and falling with the prime interest rate.

So what's the future trend? TRW isn't quite certain. To be sure, cash positions are still showing substantial improvement. But the interest rate factor is a lot more "iffy" as lending charges bottom out. If nothing else, the latter would seem to imply that further improvement

in the TRW past-due index may be considerably harder to come by.

CURRENT PRICES

Another month of moderate increases

Chalk up another month of moderately accelerating commodity industry-price increases.

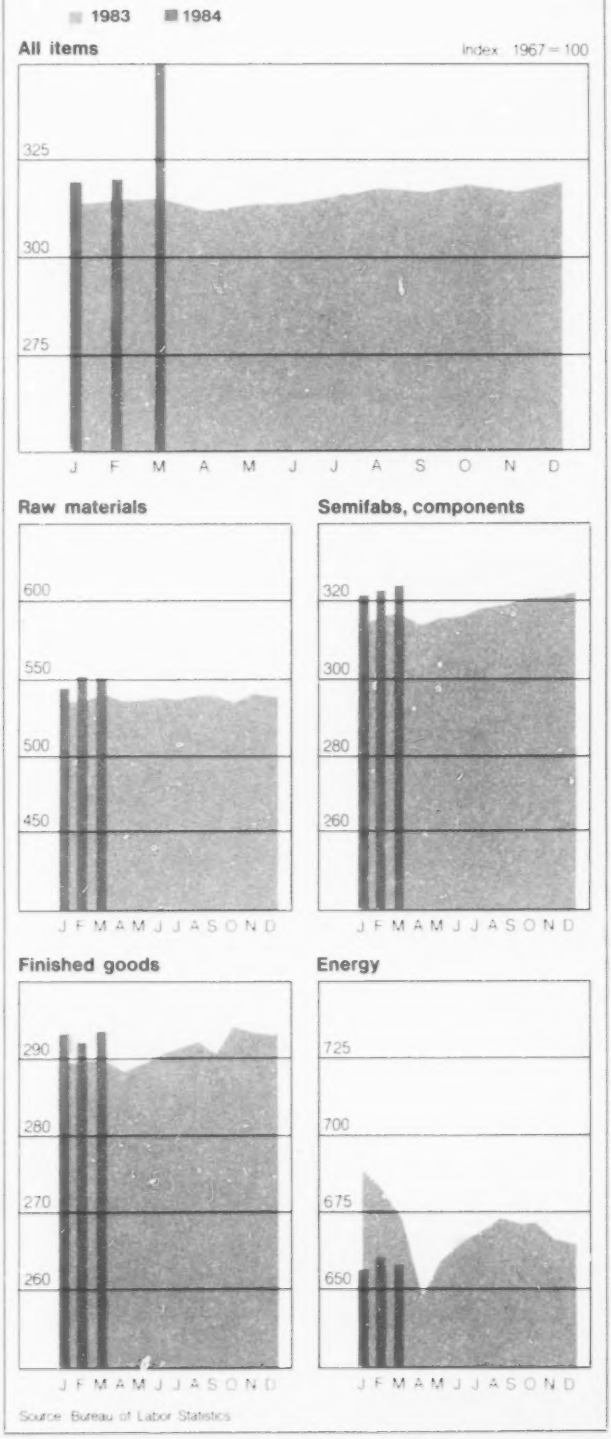
That's not to say that things are getting out of hand—far from it. Uncle Sam's all-inclusive price yardstick (see chart) is currently rising at only a 5-6% annual rate. On the other hand, the current rate does mark a significant change from the relatively flat pattern that prevailed through most of last year.

Leading the pack this

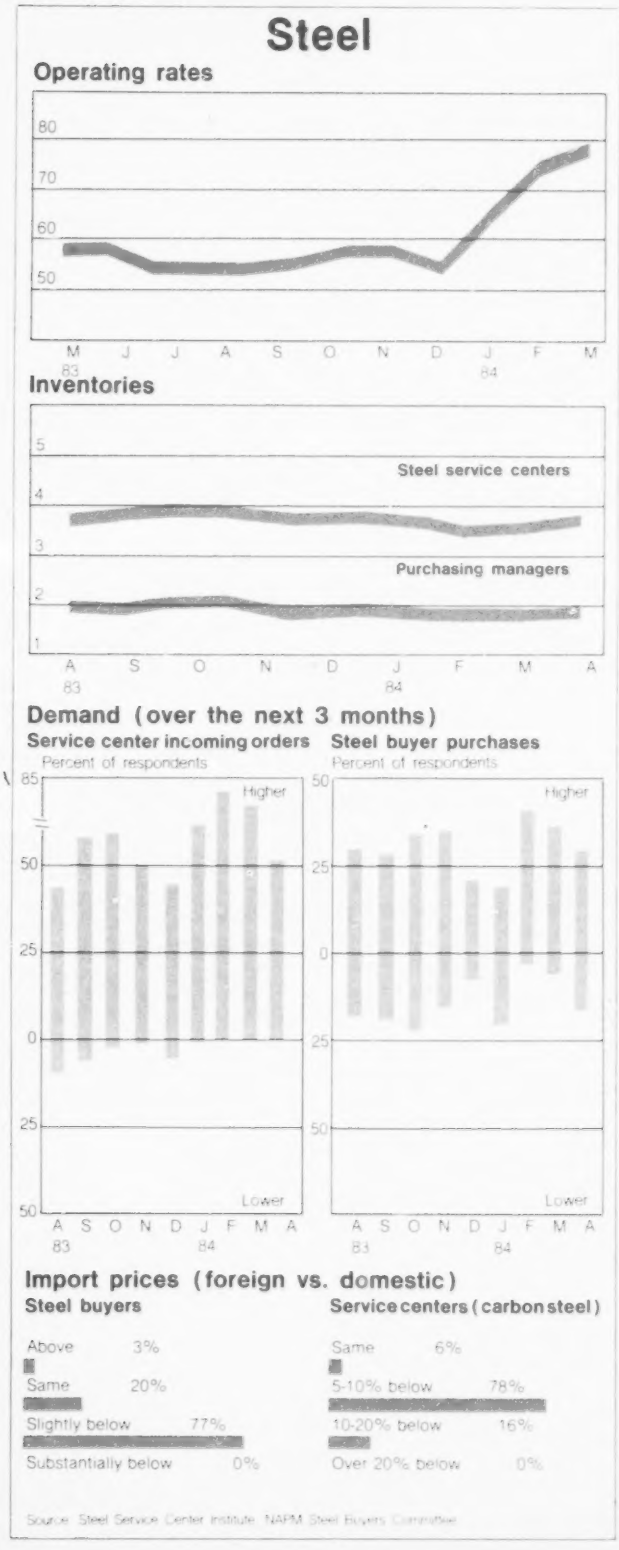
This month's breakdown

	Latest level (Feb)	% change from: Month ago	Year ago
Bearings	335.5	0.0	1.3
Bolts, nuts, etc	272.0	0.4	1.2
Chemicals, inorganic	288.4	−0.4	−4.0
Chemicals, organic	361.8	−3.8	0.8
Concrete products	306.4	0.3	2.1
Corrugated cartons	251.7	1.0	4.4
Cutting tools, small	279.4	−0.2	0.8
Electric lamps (bulbs)	332.3	−1.5	8.8
Electronic components	190.1	0.7	6.1
Fans and blowers	341.2	1.1	1.2
Foundry and forge products	357.1	0.8	2.9
Fuel oil (residual)	1092.4	−6.2	5.6
Furniture, commercial	293.9	1.1	4.1
Gasoline	563.9	−1.1	−6.4
Glass, flat	230.0	0.2	0.1
Glass containers	350.9	0.0	−1.4
Gypsum products	339.4	3.3	26.9
Hand tools	353.9	0.3	1.6
Hand tools, power driven	223.5	0.6	0.9
Industrial furnaces	370.6	0.1	3.8
Integrating and measuring instruments	228.8	1.3	4.4
Internal combustion engines	344.3	0.0	2.2
Lubricating oil	797.9	0.4	−2.5
Lumber millwork	308.5	0.0	2.7
Material handling equipment	287.2	0.1	0.8
Metal containers	344.9	0.1	4.2
Metal mill shapes (nonferrous)	318.1	0.9	1.7
Metal tanks	304.6	−0.1	−1.1
Metalworking machinery	330.4	1.2	1.8
Motors and generators	337.7	0.1	4.5
Motor trucks (10,000 lb and under)	280.8	0.1	3.0
Office and store equipment	154.3	−1.0	0.3
Paperboard	269.3	2.7	10.3
Paper boxes and shipping containers	255.0	1.0	2.9
Paper office supplies	233.6	0.9	3.0
Paint	266.9	0.5	0.8
Plastic resins	305.0	0.3	7.7
Precision measuring tools	245.4	0.0	0.8
Pumps and compressors	346.3	0.1	−1.0
Refractories	357.0	0.6	5.7
Rubber belts and belting	336.8	1.4	4.0
Scales and balances	229.5	0.7	1.7
Steel products	360.4	0.3	3.4
Switchgear	272.4	1.3	−0.2
Textiles, synthetic fibers	161.5	1.4	5.5
Textiles, gray fabrics	152.8	0.0	5.9
Tires and tubes	243.0	0.0	−3.0
Transformers and power regulators	219.9	−1.6	−1.6
Welding equipment	276.9	0.3	−1.0
Wire and cable	201.8	0.0	−1.7

Industrial prices



Source: Bureau of Labor Statistics



time around is the nonferrous metals sector. Price advances over the past month or two have been recorded in copper, zinc, lead, nickel, and a host of minor metals including cobalt, mercury, tungsten, magnesium, and silicon.

Steel prices, too, are steadily inching up. True, the official government index here suggests that current levels are only averaging about 3½% above a year ago. However, this doesn't fully reflect the slow drying up of discounts and other forms of shading that have probably added as much as another 6-7% onto average quotes vis a vis year-earlier levels.

Also heading up are many building materials, reflecting the still-booming housing market, where starts have been running near a 2-million-unit annual rate. Not surprisingly, price increases here have hit lumber, plywood, sand, gravel, brick, and asphalt paving materials—with the overall average now running about 5% above last year at this time.

Paper products, too, are on the upswing. Hefty increases since the beginning of the year, for example, have hit fine papers, newsprint, linerboard, and corrugated boxes.

Plastic resins have moved up equally as fast. Year-to-year advances are averaging near 8%, and new increases are hitting such popular materials as polyethylene, polypropylene, polystyrene, and ABS resins. But organic chemicals have remained a bit more sluggish, with advances generally falling short of producer announcements.

STEEL SCENE

Increasing demand to continue

Figure on continuing increases in steel demand—though the advances will not be quite as robust as those racked up during the first few months of 1984.

Both buyers and steel service centers are pretty much in agreement on this score. On the purchasing front, for example the 30% who contemplate increased deliveries over the next few months is somewhat less than the 36% of the previous month. Equally significant, some 16% now plan to take in less metal (versus only 6% just one month ago).

Distributors responding to the latest Steel Service Center Institute (SSCI) survey tell virtually the same story, with 52% anticipating order gains over the next three months, down substantially from the 80% and 75% readings of February and March respectively.

But few seem really worried. SSCI President Andrew G. Sharkey, for example, is still betting that shipments for the year as a whole will approach the 19-million-ton mark, making for the best showing since 1979.

The flat-rolled market, according to Sharkey and other SSCI spokesmen, remains the strongest, run-

ning nearly 40% ahead of a year ago during one recent month. But other sectors are beginning to pick up, too. The daily shipping rate is beginning to rise for plates, bars, structurals, and tubes.

Nevertheless, overall buying has been brisk enough to cause some availability problems. Items mentioned by distributors as being possible headaches include coated sheet, cold-rolled sheet, hot-rolled sheet, plate, and stainless.

The nation's big steel buyers seem to confirm this trend toward increasing tightness, with coated sheet and cold-rolled sheet both mentioned by 20% or more of the survey respondents. Equally significant, some 40% of all buyers admit to some supply availability question-marks over the coming six months.

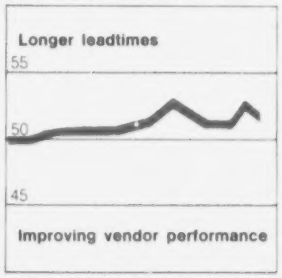
This, in turn, is making for some second thoughts about further inventory cutbacks. In any event, months' supply ratios are starting to bottom out as both distributors and buyers begin adding a little bit extra—just in case. Note, for example, that the latest months' supply readings for both groups are fractionally higher than for the previous month.

Meantime, imports continue to figure heavily in overall buying plans—and with good reason—as the U.S.-overseas price gap persists. For instance, a big 29% of the service centers buying foreign metal note differentials of 11-20% in stainless. And the 16% who note the same gap for carbon types is also quite impressive.

Monthly procurement status report

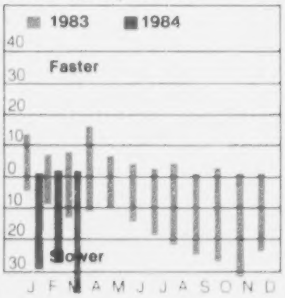
Leadtime index

A 'diffusion' index based on 156 key commodities. Above 50 indicates a tendency for leadtimes to stretch out. Below 50 suggests improving vendor performance.

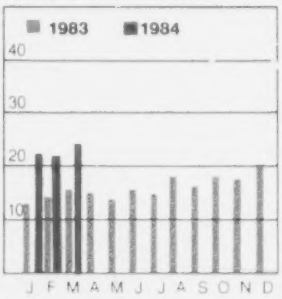


Delivery performance

Percent reporting deliveries

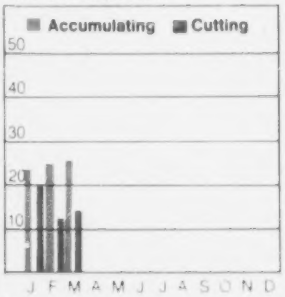


Forward commitments



Inventory strategy

Percent of respondents



Source: NAPM

PROCUREMENT STATUS

Leadtimes still stretching

The inexorable stretchout in leadtimes continues.

To be sure, few items are in really critically short supply, notably selected electronic components and a few scattered steel items. But delivery performance is hardly worth shouting about. The latest NAPM business survey report finds that 27% of the respondents are currently being hit with slower deliveries, and only a miniscule 2% are getting things faster.

PW's exclusive leadtime index tells much the same story. The latest reading of 52 suggests a modest stretchout (50 is neutral, or no overall change)—pretty much in keeping with the trend of the past year or so. But that reading isn't all that bad compared to the late 1970s (during the last business boom) when index readings as high as 55 and 56 were not uncommon.

The situation is perhaps best summed up by one buyer, who notes, "I can't say we're faced with all that many shortages. But we're doing a heck of a lot more expediting to make sure deliveries get here on time—or at least with as little delay as is humanly possible."

Others add that what makes matters so critical is the recent trend toward just-in-time deliveries. They note that the wide tolerances for slippage just aren't there anymore.

Also indicative of more concern are:

- *Increases in forward purchases.* More than one out of three buying executives surveyed now are saying they're committing 90 days or more in advance for production materials. That's a sharp contrast to a year ago when the comparable figure was only 15%.
- *Rising inventories.* Some 26% were reporting additions at latest report—the highest such number in nearly 5 years (July 1979). The number of those paring, meantime, continues to diminish, from 20% in January to only 14% currently.

Leadtimes and availability

Chicago: Caustic soda has come in a bit to less than half a week. Ditto softwood sheathing (1 week) and plyform (2). But nonferrous metals are stretching. Aluminum coil and sheet are sometimes in excess of 16 weeks. Also out are aluminum plate (12), aluminum angles and bars (6-8), brass and copper sheet (16-18), brass rod (4-5).

Cleveland: Plastic resins have stretched out another week, with 3-4 weeks now needed for polyethylene and PVC. Drums remain unchanged: 2-ply fiber (2), steel reconditioned (1-2), and steel canisters (6). Ditto, lumber (3), alloying materials (on demand), glassines and greaseproof papers (4-5), and plastic shrink film (3).

Los Angeles: Mixed trends here—mostly up. Going out to these new, higher leads are grey iron castings (8-10), brass castings (12-14), electromechanical devices (12-14), specialty wire (8), fasteners (8-10), semiconductors (30), and printed circuit boards (12). In are galvanized steel (16), alum. pipe (13), passive components (20).

BUSINESS DATATRAK

Houston: A few heavy equipment items have come in a bit, with these new, monthly waits: reciprocating compressors (6-12), centrifugal compressors (10-12), pumps (6-10), and boilers and furnaces (7-9). But there are a few offsetting stretchouts: field-fabricated pressure towers (7-12) and turbogenerators (6-16).

Philadelphia: Somewhat longer leads (in weeks) are noted for aluminum bar, sheet, and extrusions (6-8), and carbon steel bar round shapes from the mill (6-8). Some tightness is expected in corrugated, too. But plastic sheet (polyethylene, polypropylene, and polystyrene) has come in (to 4-6); polyethylene bags, unchanged at 3.

Pittsburgh: Polyvinyl chloride resins have moved out an additional week (to 6). But magnesium delays have been halved (to 3). Other relatively unchanged leads prevail for steel strapping (2-3), coil coating paint (4), mill quantities of copper fabricated products (6), multiwall bags (6), drums (1), and corrugated boxes (3-4).

Leadtimes (in weeks)

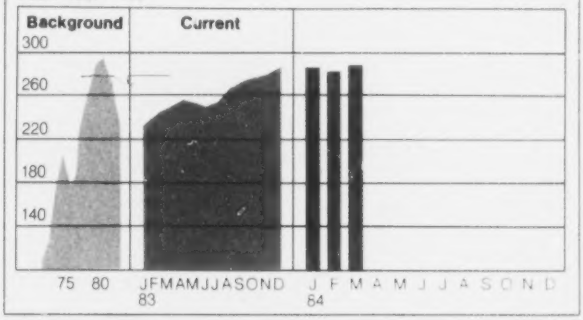
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	9	9	7
C-R Sheet (Chgo)	8	8	10
Plate (Phil)	10	10	6
Plate (Chgo)	6	6	3
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	7	7	4½
H-R Bars (Chgo)	3	3	2½
Cold-Drawn Bars (Phil)	7	4½	4½
Galvanized (LA)	16	20	7
Galvanized (Chgo)	9	9	7
Structurals (Chgo)	3½	2½	2½
Structurals (Hous)	17	17	15
Tubing (Phil)	7	7	6
Grey Iron Castings (LA)	9	8	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	13	13	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	13	9	8
ICs (Linear) (Phil)	20	20	11
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	17	17	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	10	10	10
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	1½	1½	2½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Napthalene (Chgo)	2	2	2
Paint (LA)	5	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	3	3	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	3	3	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2½
PVC Resin (Pgh)	6	4	4
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	4	4	4
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	15	15	11
Aluminum Plate (Chgo)	12	9	9
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	15	15	14
Brass Castings (LA)	13	7	7
Brass Rods (Chgo)	4½	3½	3½
Brass Sheet (Chgo)	17	15	8
Brass Tube (Chgo)	9	9	9
Copper Fittings (LA)	3½	3½	6½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	5½	5½	6½
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	3	6	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	3
Wire, Specialty (LA)	8	6	5
Zinc (Pgh)	6	6	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2½	2½	12
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	52	52
Compressors, Reciproc. (Hous)	39	43	39
Fasteners (Chgo)	1½	1½	½
Fasteners (LA)	9	6	4
Fasteners, Std. (Phil)	2	2	2
Heat Exchangers, Carbon-alloy Steel (Hous)	20	20	20
Heat Exchangers, Hi-pressure (Hous)	21	21	21
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	2	2	1
Pumps (Hous)	35	39	39
Pumps (LA)	9	9	9
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	6½	6½	8
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month	289.2
Month before	283.6
Year ago	248.8

Index: 1967 = 100



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	24.40
Steel, bars, dlvd. Phila., cwt., merchant quality	17.50	17.50	17.50
Steel, bars, Pitts., cwt.	17.50	17.50	17.50
Steel, bars, C.R., Pitts., cwt.	26.00	26.00	26.00
Steel, plates, Pitts., cwt.	23.25	23.25	25.75
Steel, plates, H.R., Pitts., cwt.	23.25	23.25	25.75
Steel, sheets, C.R., Detroit, cwt.	27.10	27.10	26.15
Steel, strip, C.R., Chi., cwt.	35.30	35.30	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.698	0.715	0.630
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	5.20	5.20	4.95
Brass, red, 85%, [sheet], lb.	1.30	1.25	1.28
Brass, yellow, [sheet], lb.	1.25	1.20	1.22
Cadmium, ton lots, lb.	1.50	1.50	1.00
Copper, electrolytic, wire bars, refd., lb.	0.75	0.70	0.80
Copper sheet, over 24 in., lb.	1.39	1.34	1.37
Lead, common, N.Y., lb.	0.26	0.24	0.21
Magnesium, pig ingot, [99.8%], lb.	1.43	1.43	1.34
Mercury, 20 fl. lots, N.Y., fl.	322.00	300.00	330.00
Molybdenum Climax Oxide/bags, lb.	4.65	4.65	4.65
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	9.23	9.82	11.24
Tin, Straights, N.Y., lb.	6.36	6.45	6.90
Zinc, Prime West, East St. Louis, lb.	0.53	0.51	0.38
Zinc, die casting alloy, No. 3, lb.	0.595	0.575	0.465
PAPER			
Uncoated book #3 offset, ton	810.00	810.00	680.00
Watermarked bond, ton	985.00	985.00	845.00
Gummed sealing tape, carton	15.45	15.45	15.50
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	475.00	475.00	475.00
Wrapping paper, std. distributor cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	320.00	320.00	270.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.306	0.306	0.269
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.04	1.03	0.95
Cotton middling, 1", N.Y., lb.	0.763	0.733	0.658
Printcloth, 48", 80x80, N.Y., spot, yd.	0.82	0.80	0.57
Army duck, 37", 13 oz., yd.	1.79	1.79	1.60
Blended printcloth, 64", 78x54, yd.	0.760	0.725	0.670
26s combed yarns	2.16	2.14	1.68
Wool tops, N.Y., lb.	3.60	3.60	3.60

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	0.455	0.430	0.430
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	150.00
Benzene, petroleum, tanks, Houston, gal.	1.48	1.43	1.46
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.58	0.58	0.66
Formaldehyde, USP, 37% [12% to 15% meth.], tanks, lb.	0.106	0.106	0.106
Glycerine, synthetic, tanks, lb.	0.81	0.81	0.73
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.450	0.450	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.305	0.305	0.255
Polyethylene resin, low density liner film grade (market price), lb.	0.43	0.42	0.32
Polypropylene, homopolymer grade (market price), lb.	0.42	0.41	0.34
Polystyrene, general purpose grade (market price) lb.	0.45	0.44	0.37
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.35	0.35	0.30
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	140.00	140.00	135.00
Sulphuric acid, 66%, commercial, tanks, ton	56.35	56.35	56.35
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.35	1.35	1.42
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl.	324.55	316.85	321.45
Lumber, 2x2, pine, mbf, cl.	324.45	315.30	319.10
Plywood, plyform, ¾", msf, cl.	570.30	562.05	541.95
Plywood, ⅜", msf, cl.	371.40	364.10	351.05
Cement, bulk, ton, tl.	62.24	62.44	62.34
Sand, ton, cl.	6.19	6.13	5.94
Ready-mix concrete, 3,000 psi/cu yd., 15 cu. yd.	45.67	45.47	45.84
Crushed stone, 1½", ton, cl.	7.87	7.87	7.88
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl.	0.76	0.76	0.75
Gypsum sheathing, ½"x1"x8", msf, tl.	198.97	199.34	161.51
Brick, common, per thousand, tl.	173.88	172.78	173.55
Asphalt paving, AC-20	163.82	163.54	157.27
Concrete sewer pipe, 12", prem. joint, per foot, cl.	6.80	6.79	6.78
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	27.50	24.75	23.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	31.40	32.15	27.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.860	0.790	0.755
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.830	0.805	0.826
Heating oil, No. 2, Chi., bulk, gal.	0.800	0.789	0.730
Heating oil, No. 2, N.Y., bulk, gal.	0.873	0.838	0.778
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.25	26.25	24.10
Jet kerosene, gal.	0.800	0.795	0.775
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.425	0.440	0.465
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	102.00	100.00	73.00
Steel, No. 1, hvy., dlvd., Chi., ton	84.00	88.00	73.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.655	0.625	0.690
Copper, No. 2, East, wholesale buy,	0.560	0.530	0.600
Brass, red, East, wholesale buy, dlvd., lb.	0.615	0.585	0.650
Brass, yellow, East, wholesale buy, dlvd., lb.	0.398	0.383	0.360
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.505	0.495	0.325
Alum., mixed clip, E., wholesale buy, dlvd., lb.	0.515	0.510	0.340
Zinc, old, East, wholesale buy, dlvd., lb.	0.185	0.185	0.080
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.145	0.140	0.120
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	32.00	30.00	10.00
Paper, old corrug. box, dlr., N.Y., ton	29.00	27.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.135	0.130	0.100
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.34	0.34	0.36

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

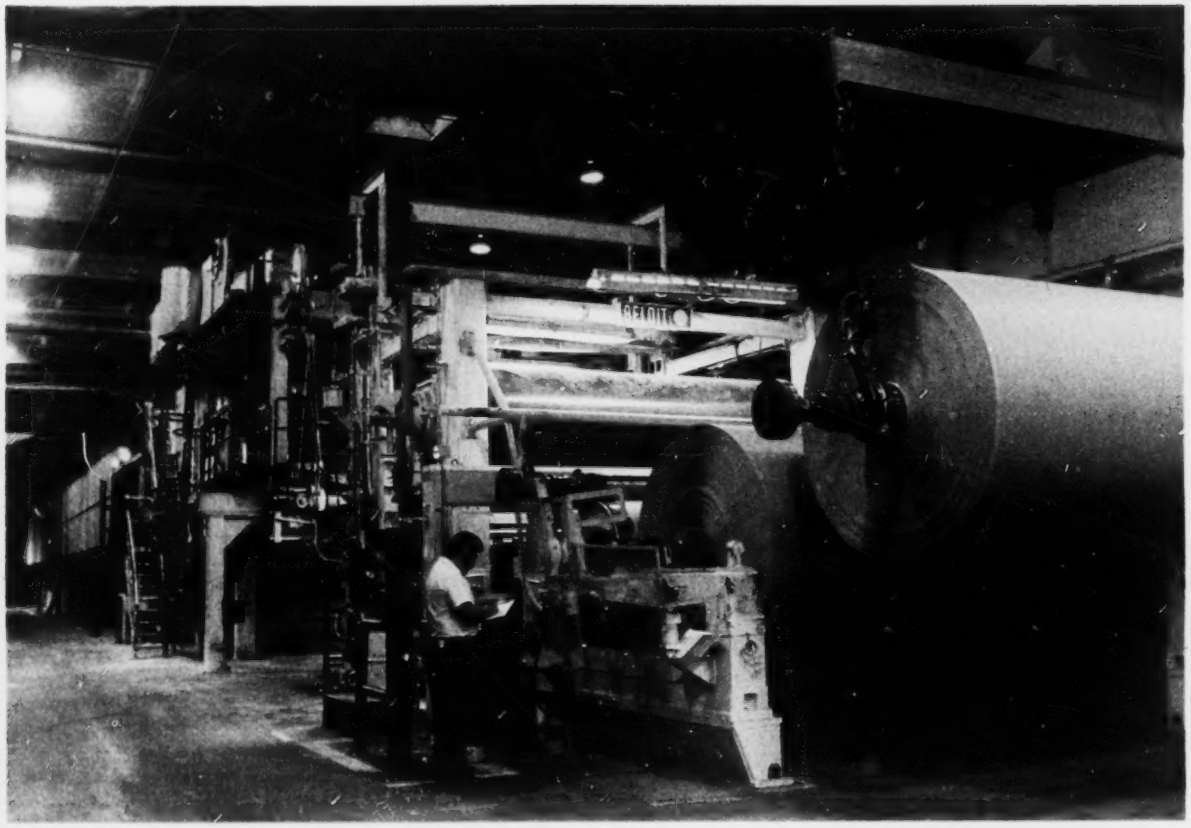


Photo courtesy of Container Corp. of America

Packaging markets: Purchasing feels the pressure

Robert S. Reichard, executive editor

The nation's packaging buyers have their work cut out for them.

Near-term, they'll be busy parrying price-boosting thrusts that are already beginning to hit virtually every major material—paper, metal, glass, and plastics. Some delivery stretchouts seem a foregone conclusion as the economic recovery goes into its second year.

True, some of these price and supply pressures could ease off a bit in 1985 and 1986 as business gains slow down. But some of the longer-term problems (or challenges) will persist for purchasing managers. They will have to be concerned with the complex task of evaluating and choosing among the growing number of new products and designs that will be coming on the market in years immediately ahead.

The above appraisal is pretty much the consensus—not only of buyers, but also of vendors and packaging consultants—all of whom have been queried in a new ***Purchasing World*** analysis of this crucial industry which currently accounts for almost 5% of the nation's entire output of goods and services.

Please turn the page for a graphic overview of how packaging markets are faring today and are likely to change in the future.

Some of the key findings and trends revealed by the just-completed study:

■ *1984 prices.* Even with near-heroic efforts, buyers are now reconciled to a 5% or slightly higher increase in overall packaging costs this year—all in marked contrast to the near-stable quotes (and even a few declines) that they had experienced through most of last year. In any event, it's hard to shrug off the finding that more than four out of every five respondents expect a sizable acceleration in the rate of price increase this year.

■ *Near-term demand.* The majority of purchasing managers see a 5% or larger increase in their real or physical packaging needs this year. That's not only above 1983's estimated 4% advance, but enough to set new all-time records for most packaging modes. The lion's share of the projected advance will be to meet increased consumption—but a not insignificant part will also reflect some inventory rebuilding.

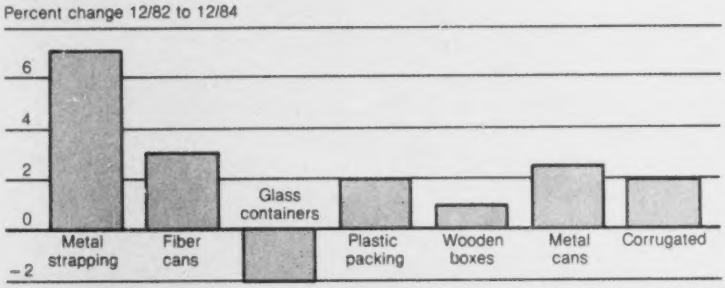
...continued

Packaging markets: an overview

Recent trends

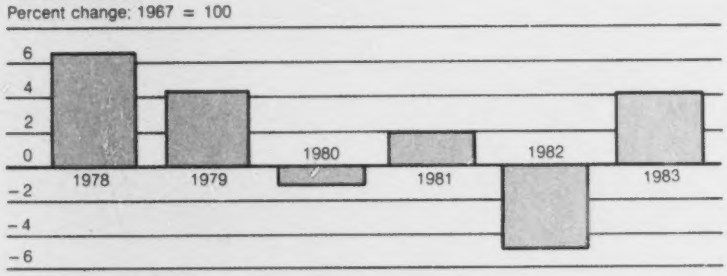
Prices

Percent change 12/82 to 12/84



Production

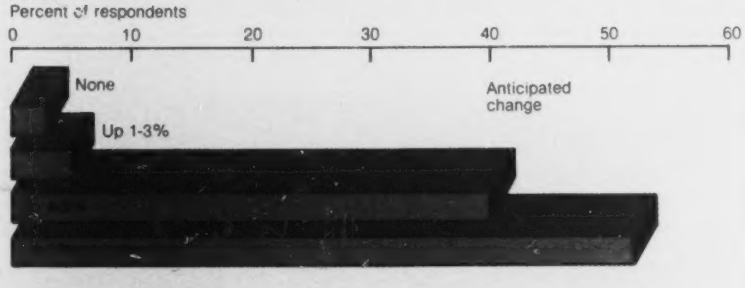
Percent change; 1967 = 100



The 1984 Outlook

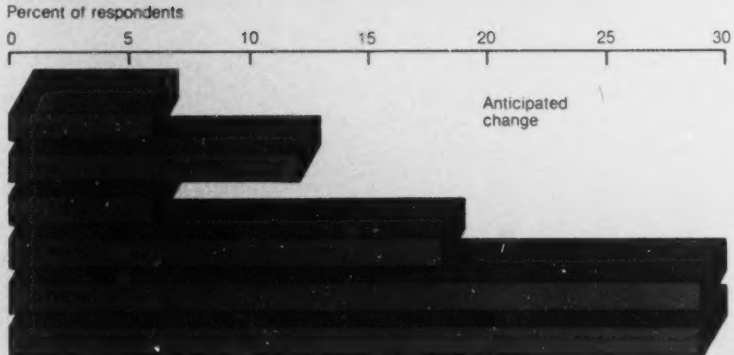
Prices

Percent of respondents



Demand

Percent of respondents



Sources: Bureau of Labor Statistics, Federal Reserve Board, PurchasingWorld

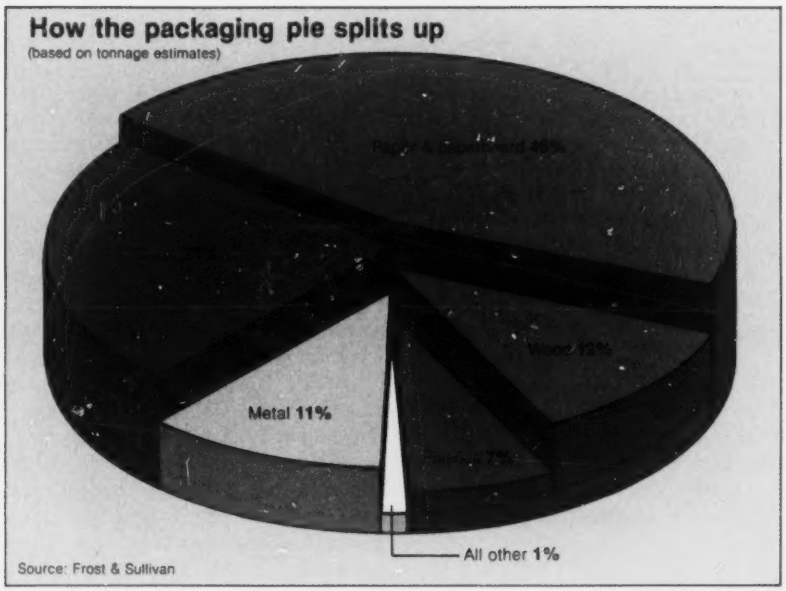
■ *Near-term supply.* There's some concern about longer leadtimes—particularly in the paper sector (as paper-board mills operate at pretty much near-full capacity). Also worth noting: More than 50% of the PMs contacted said they expected to have some kind of procurement problem over the remainder of the year—with non-paper products such as plastic film and foil laminates also put on some of their "areas of concern" list.

■ *Long-term demand.* Things should quiet down after the current year—reflecting both the refilling of inventory pipelines and the somewhat less ebullient GNP increases now being projected for 1985 and beyond. Best bet for the next five years: Average packaging gains in the 2-4% range—pretty much in line with general economic growth. One exception: Plastics where advances could run anywhere from 1½-2 times the GNP increase.

■ *A changing mix.* All sources agree that package proliferation and change is the name of the game—with the basic emphasis continuing to be on the development of less costly constructions that provide the same or better protection and promotional impact. Plans in the works, for example, not only call for the introduction of still thinner gauges but also upgrading through the use of better materials and graphic designs.

Among other things, this implies (1) continued rivalry between aluminum and steel for the can market, (2) increased competition among glass containers, metal cans, and plastic bottles...both in the food and nonfood spheres, and (3) further flexible packaging inroads into traditional rigid packaging applications.

Then, too, packaging is becoming more of a custom than a commodity purchase—as both buyers and sellers zero in on specific product applications. This latter development, in turn, will require still more changes—namely the need for closer vendor-buyer relationships, more product testing, increasing emphasis on



quality as packaging lines become more automated, and finally, the willingness to explore new, more radical approaches.

On the latter score, Campbell Soup has already strongly hinted that the days of the traditional tin soup can are numbered. Thus the company is said to be ready to emphasize more convenience-oriented containers like aseptic boxes and plastic microwaveable bowls. These innovative packaging forms would eliminate such present day inconveniences as the need for a can opener, mixing the soup with water, heating, and even the cleaning of utensils.

More about these and other technological developments in the story that begins on page 56. But, first some further comments on where the industry is today, and, more important, how market trends seem to be shaping up over the next few years on a product-by-product basis.

Packaging's role in the economy

It's difficult to put a precise overall dollar figure on the amount of money earmarked for packaging. But, if one includes such diverse items as rigid containers, semi-rigid containers, flexible packaging—as well as such component products as caps, closures, twine, labels, inks, and tapes—then a figure in excess of $70 billion a year doesn't seem to be all that much out of line.

More significant, however, is the role that packaging plays in purchasing—with a surprisingly large number of buyers estimating that 5% or more of their overall purchase mix goes for some form of packaging. But even this doesn't tell the whole story. One big brewery responding to PW's new survey, for example, notes that packaging accounts for more than 50% of its total procurement dollars. Then, too, the percentage for many food companies runs in the 20% range and higher.

The raw material suppliers of these packaging items have an equally important stake in both near-term and longer-term trends. Just how much of a stake is suggested in a recent Frost and Sullivan study which finds that more than 50% of all converted paper and paperboard goes into some form of packaging.

The percentages for other materials are almost as impressive—with packaging accounting for 45% of all the glass produced, 25% of all plastic resin, 23% of all aluminum, 8% of all steel, 37% of all inks, 35% of all pressure sensitive tapes, and 25% of the dollar value of adhesives.

Packaging's role in the economy can also be viewed from still another vantage point—namely the portion of the overall mix earmarked for specific materials. As might be expected, paper packaging is still the number one purchase item—primarily because nearly every product sold requires some type of corrugated carton. Add in other types of boxes and flexible wrapping—and some 46% of all packaging on a tonnage basis goes for some kind of paper (see chart).

The figure, supplied by Frost and Sullivan, also suggests that other current packaging shares—in descending order of importance: glass (23%); wood, including pallets and skids (12%); metal (11%); plastics (7%); and all other (1%).

Plastics may be at the bottom of the list, but it is now, and will continue to be, the fastest growing component by a wide margin. These versatile synthetic materials look to be the big winner over the next few years—capturing more of the market from competing materials.

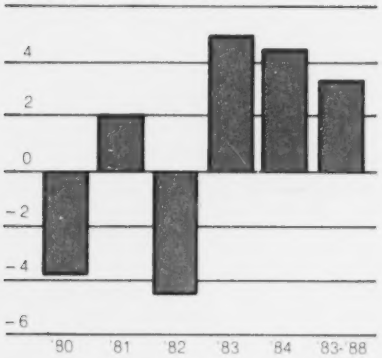
A closer look at corrugated

Lest there be any doubt on the crucial role played by corrugated cartons, take a look at the latest government figures which show that U.S. industry shelled out more than $11 billion last year for these containers. In quantitative terms, some 252.9 billion square feet were shipped in 1983. Add another 4-5% gain for the current year, and the total for 1984 could approach 265 billion square feet.

Box capacity seems more than adequate to meet this projected total. But there is some concern about linerboard (the basic material)—with mills expected to operate at 96-97% of their rated capacity this year according to a recent Dean Witter Reynolds estimate. That's some three percentage points above last year and more than 10 percentage points above the low 84.5% figure

Corrugated cartons

(% change in real demand)



Source: Commerce Dept.

reported in recession-ridden 1982.

Booming demand here will, of course, impact on prices. Thus buyers responding to PW's new survey generally put 1984 corrugated increases in the 5-15% range—with the overall advance averaging somewhere near 10%.

On the other hand, there should be enough unbleached board to go around to avoid any really serious across-the-board shortages and hence spiralling prices. As one paper spokesman recently put it, "We should manage to get through the current period without too much sweat—as new capacity comes on stream at near a 1½% annual rate through 1986, and mills make adjustments to squeeze out just a bit more board."

The longer pull also suggests a basically livable situation—with corrugated demand expected to grow at a relatively moderate 3-3½% annual rate over the 1983-1988 period.

Major innovations over this extended time span will include further development of multiwall box technology, increased use of flexography in color printing, improvements in graphic design, and the development of adhesives that will be compatible with steadily increasing corrugator machine speeds.

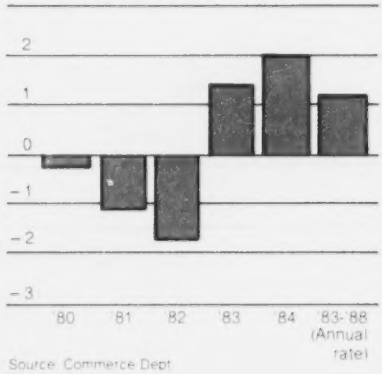
Other paper packaging products

While corrugated obviously dominates, it's hard to ignore such other big segments of the paper packaging industry as folding boxes, sanitary food containers, bags, and set-up paperboard boxes—where dollar billings last year were put at $4.0 billion, $2.8 billion, $5.2 billion, and $0.5 billion, respectively. But for the most part these sectors are all relatively slow growth areas. Looking at each of them separately:

- *Folding cartons.* This packaging mode is less dependent on overall GNP than on consumer spending—and should therefore show only about a 2% gain this year. Nevertheless, prices are expected to rise anywhere from 5-10%—with the actual amount depending on both geographical location and bargaining leverage.

Folding paperboard boxes

(% change in real demand)



Source: Commerce Dept.

The 5-year outlook, meantime, suggests even slower growth. Right now advances of just over 1% a year are anticipated—as competition from plastics and other types of paperboard containers takes its toll.

- *Sanitary food containers.* A 1% decline is expected for 1984—making for the sixth straight year of falling demand. The drop-off primarily reflects the lingering impact of reduced milk container shipments. True, the longer-run 1983-88 period suggests a modest turnaround—maybe 1% average annual increases—as the positive effects of the industry's new ovenable and aseptic product lines begin to become more apparent.
- *Bags.* A fair-sized 3% real gain in demand is anticipated for the current year, though this will in large part be due to increasing use of plastic bags which are counted in this industry group (SIC 2654). As for prices, paper types are expected to rise by as much as 8-10% this year—with plastic types, including films, expected to increase between 5-8%.

The long-run demand picture isn't much different—2% annual gains, with inceasing inroads by plastics which are expected to account for 65-70% of the total real value of bag shipments by 1988. On the plastics' fronts, for example, good growth is projected for film bundling (shrink and stretch) which will capture an increasing market share from corrugated. And retort food pouches, constructed of layers of plastic film and aluminum foil, will finally begin to show significant increases after several years of disappointing growth.

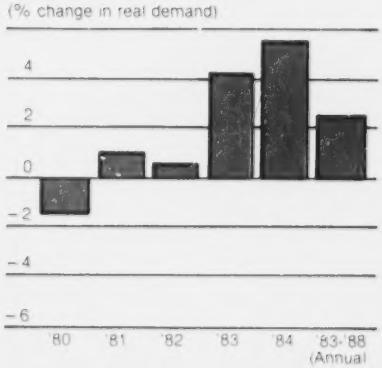
- *Set-up rigid paperboard boxes.* All signs point to about 2% real gain this year—slightly in excess of 1983's 1.7% advance. And for the more extended 1983-88 period, little more than 1½% annual rate of increase is contemplated—as competition from folding boxes and plastics continues. That's hardly earthshaking, but a lot better than the past 10 years when real shipments in this sector were dropping at near a 5% annual rate.

The metal can outlook

Look for continued good demand

Metal cans

(% change in real demand)



Source: Commerce Dept.

gains—with about 98.3 billion cans expected to clear the market this year—some 5.6% above 1983, which, in turn, was 4% above recession-impacted 1982. And, similar to last year, beverages will account for about two-thirds of all can shipments.

As for the battle between aluminum and steel—aluminum has made great strides—and now accounts for some 60% of all cans—up from only 33% just five years ago. Aluminum is also making some progress in the food (as contrasted to beverage) area. The metal now accounts for 4% of the food can total—and has been increasing share by about one percentage point a year. One thing for sure—the potential is large—about 30 billion food cans a year.

All the above is not to say that aluminum and steel have these markets to themselves. There is still plenty of infighting with other packaging modes—with major brewers now opting for glass in the light and premium beer market. In soft drinks, continued use of standard-size 16-ounce glass and plastic bottles is expected to add another restraint to overall can growth.

These competitive pressures notwithstanding, rising metal prices could push can prices up as much as 10% this year. Going further out into 1985 and 1986, however, price boosts should moderate—running about 5-7% a year. Somewhat smaller demand gains over the longer run are also forecast—with advances of only 2-3% a year seen through 1988 on a combination of demographic and life style changes—plus increasing inroads from plastic types.

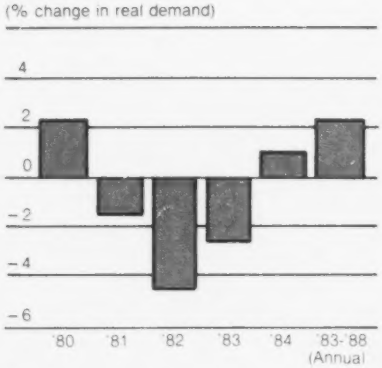
Slow growth in glass

The traditional glass container is likely to show only a small 1% increase in total units this year (to 302 million gross). Blame it on increasing competition from other types of packaging, notably plastic bottles.

Nevertheless, the industry is in fairly good financial shape following (1) the recent phasing out of less profitable operations, (2) the relatively modest wage boosts negotiated over the 1983-85 period, and (3) favorable costs of such raw materials as silicon, soda ash, and limestone. These cost trends—plus less than sensational demand and increasing competition with other packaging modes—also suggest very modest prices increases (5% or less at annual rate)—both for the current year and probably into early 1985.

Glass containers

(% change in real demand)



Source: Commerce Dept

For the longer run, the industry is still fairly optimistic—talking in terms of a slightly larger than 2% annual rate of advance through 1988—though the plastic PET bottle could eventually eat into glass's big market for alcoholic beverages.

Plastic bottles: taking off

Bullishness is the order of the day for plastic bottles. Last year, for example, the industry grew 4.5%—increasing the number of units sold to 16.2 billion. And this year looks even better—with a 5.6% increase to 17.0 billion units anticipated.

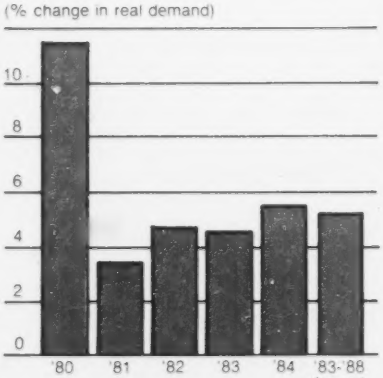
Credit much of the gain to consumer acceptance of the PET bottle—though containers made of PVC have also recorded some gains lately and high density polyethylene continues to be the dominant resin overall—accounting for more than two-thirds of all plastic resin used in bottles.

The growth pattern of 5% or slightly more is also expected to continue beyond this year—with much of the gain predicated on PET's capture of an additional share of the soft drink market and the gradual penetration of PET bottles in such new areas as wine, distilled spirits, and beer. Worth noting on the latter score: PET has virtually displaced glass in the English beer-bottling market.

Other plastics, too, are beginning to look for a piece of the action—particularly in the chemical packaging field. Resins likely to show good gains here would have to include ethylene vinyl alcohol (EVAL), high molecular weight high-density polyethylene, and Du Pont's Selar. The prize again is big—with this market offering the potential of adding several additional million pounds to total plastic packaging demand.

Plastic bottles

(% change in real demand)



Source: Commerce Dept

For a more detailed description on how these and other technological innovations are already revolutionizing the industry—impacting on both in general and on purchasing strategy in particular—see the story following.

For buyers of packaging, the emphasis will continue to be on keeping an even more watchful eye on price and supply trends of the major packaging materials. As *PurchasingWorld's* analysis suggests, each major packaging material—paper, metal, glass, and plastics—will display its own unique reaction to the uncertainties of an economic recovery that is entering its second year—and that an election year. ***PW***

PurchasingWorld

JUN/1984

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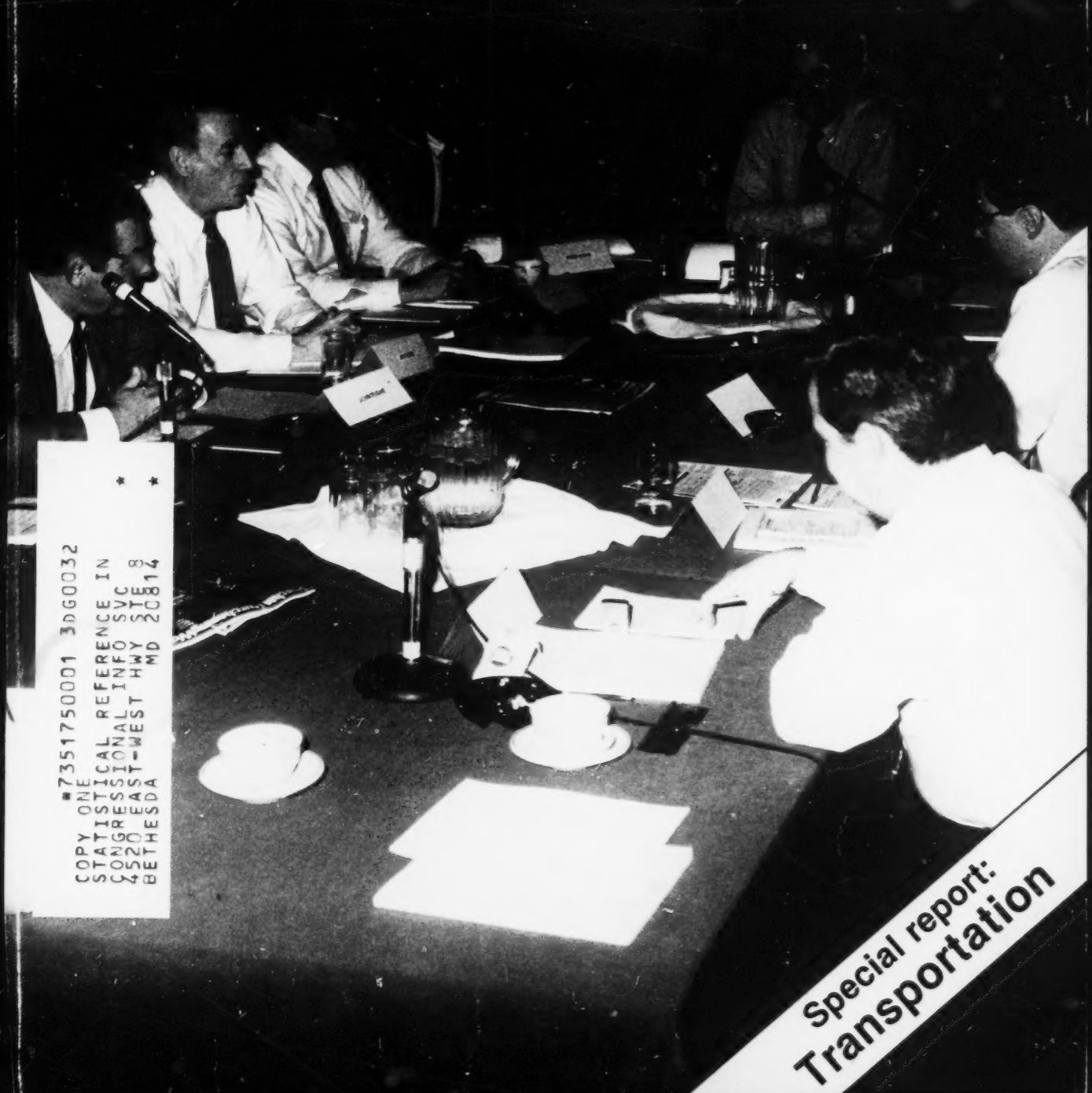
PW panelists agree it isn't "business as usual" between buyers and sellers



Special report: Transportation

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PurchasingWorld

Helping you manage the business of buying

Features

49 PW Roundtable: It isn't business as usual
The seven purchasing and three marketing executives who sat down to discuss trends in purchasing management with PW's editorial director Paul Farrell agree that the relationship between buyers and sellers is never likely to be the same again. Narrowing of supplier bases, longer term contracts, greater emphasis on quality, and a host of other developments will make sure of that.

64 it's time for your check up in transportation
Significant cost savings are possible in buying transportation services today. Take everything you see now and underscore it—more competition, better service, and, in general, a better buy for the transportation buck, according to this PW report.

70 Shipment flow analysis cuts inbound freight costs
Any company spending more than $20,000 a month on freight charges can cut transportation costs by using an outside service to pre-audit and pay its freight bills, according to Tom Godfrey of Borg-Warner Traffic Services.

92* The importance of MRO purchasing
MRO supplies are too often referred to as the "neglected commodity." Such neglect can be costly, according to consultant Ralph A. Bolton, in the first of a two-part series adapted from Auerbach's series on manufacturing, planning and control.

100* Another way to buy capital and expense items
At Prime Computer Inc. acquisition management is pushing purchasing's responsibility beyond the usual borders of production parts and MRO supplies with significant savings possible. Purchasing is in the thick of managing many heretofore offlimits expenditures.

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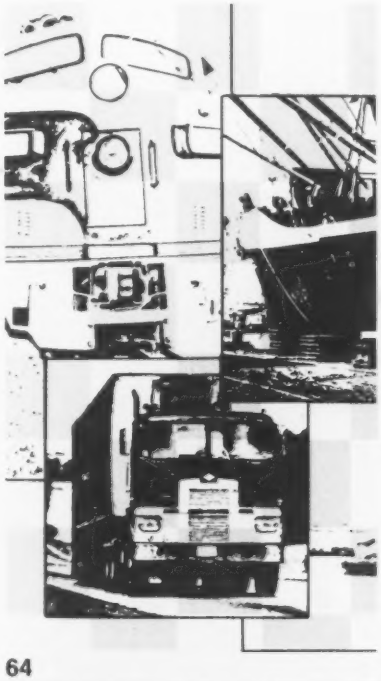
* Regional and demographic issues only

Cover photo: Pictured on this month's cover are some of the panelists in PW's "roundtable" discussion. From left to right: John Pughe (Allied Corp.) Jim Kegg (Bethlehem Steel), Phil Taddeo (Scott Paper), Fred Mohr (Bearings Inc.), Paul Farrell and Rick Dunn (PW), Gerard Coiley (American Tobacco). Not shown but also participating were: Dick Baribault (Alcoa), Bob Howard (GTE Service Corp.), Don Shire (Air Products & Chemicals), Bill Devaney (Stanley-Vidmar), John Wuycheck (Preston Trucking), and Jim Lorincz (PW).



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PW PREDICTS

Robert S. Reichard, executive editor

Putting price into perspective

Earlier fears of a major step-up in the rate of inflation seem to be disappearing.

True, there are still some purveyors of gloom and doom around who see another bout of double-digit inflation just around the corner. But, by and large, such pessimists are now few and far between.

Perhaps the most encouraging projections these days come from purchasing executives themselves. Responding to a new nationwide *PW* survey (details pg. 126), they see little more than modest near-term price acceleration—with a just-under-5% rate of advance anticipated over the next 12 months.

Equally important, this looks to be pretty much an across-the-board pattern. Thus, increases are expected to remain in the tolerable range for all kinds of products and services—including basic raw materials, component parts, machinery and equipment, energy, and freight. Average all the above together—and not one of the hundreds of PMs queried expects any return to double-digit price boosts.

And if further confirmation is needed, take a look at NAPM's 27th semiannual survey and economic forecast. To be sure, the overwhelming majority of queried buyers see price increases ahead. But only a miniscule 2% figure them to be severe—and only one in three feels that they will be across the board.

The two key cost elements of the price equation (labor and raw materials) would certainly seem to support this basically encouraging scenario.

- **Labor:** While payroll costs could rise about 6% this year, that would only be about a one percentage point acceleration over last year's results. Much of this restraint can be traced back to a still-cautious union stance—something which reflects both still relatively high unemployment rates and the fear that any really huge boost will result in still more job losses to foreign competitors.

And there's yet another plus factor here: continuing 2% or slightly higher increases in worker productivity. Combine this with the projection for a 6% increase in overall wage costs—and unit labor costs are likely to rise by only about 4% this year.

- **Materials:** It's almost too good to be true. But there's still no sign of any major upward push in basic raw material prices—despite nearly 18 months of solid business recovery. Over this period, for example, basic items (as measured by Uncle Sam's non-food crude material index) have managed only a small 3% advance. You have to go back a long way to find such restraint in these normally volatile prices. Credit the braking action to still-lingering overcapacity.

But whatever the reason, the results are clear: Up until now there has been very little upward material cost pressure on prices. And judging from latest supply-demand projections, there's precious little to suggest any change in this basic pattern over the next few quarters.

Blowmolded plastic containers

Figure on blowmolded plastic containers accounting for a much more substantial part of the typical buyer's packaging mix over the next few years.

At least that's how analysts at Frost and Sullivan see it. The big New York-based research firm anticipates that as many as 25.5 billion blowmolded units will clear the market by 1987—versus only 15.5 billion in 1982 and a better than 10% average annual gain.

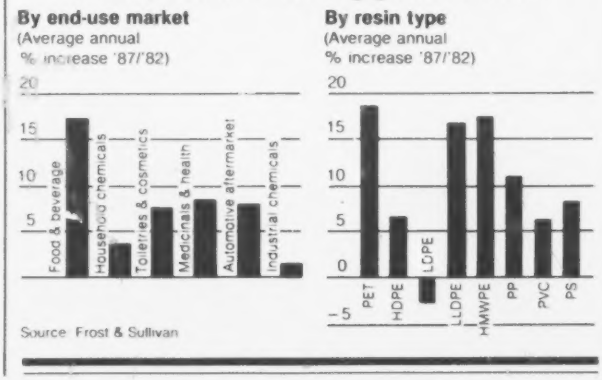
While food and beverages will account for the lion's share of the increase, some fair-sized demand gains are also projected for household chemicals, industrial chemicals, toiletries, medicines, and auto aftermarket.

Zeroing in on the food and beverage market, the biggest advances will be in alcoholic beverages (beer, wine and liquors) and soft drinks where average annual plastic container gains of 53% and 21%, respectively, are projected. Milk, a more mature market, is expected to show only 5.5% annual increases.

As for the type of resin used, high-density polyethylene or HDPE (now the dominant material with 69% of the market) will gradually lose share to polyethylene terephthalate (PET) where annual gains of 18% a year are seen—as more and more beverage makers turn to PET bottles. But even by 1987 HDPE's market share should outpace PET's by a wide margin—60% to 30%.

Other projected annual growth rates for resins in the blowmolding packaging area include polyvinyl chloride (6%—mostly for chemicals and toiletries), polypropylene (11%—mostly for medicines), and low and linear low-density polyethylene (4%—mostly for squeeze bottles).

Plastic bottles: more big growth ahead



Source: Frost & Sullivan

PW PREDICTS

Lead

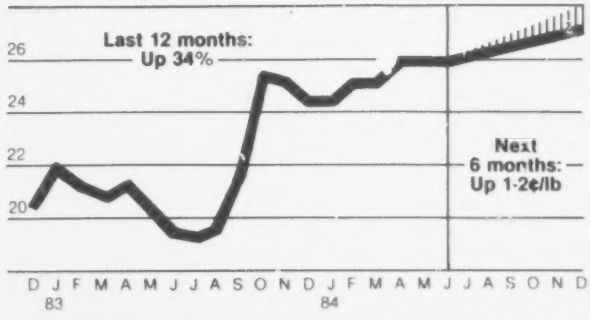
CURRENT SITUATION: Prices have temporarily stabilized in the 25¢/lb.-plus range—after rising a significant 34% over the past year (see chart below). **But buyers now have another concern: work stoppages.** St Joe's five Missouri mines, which account for 40% of all U.S. output, have been on strike. Ditto, Australia's Broken Hill Associated Smelters' big 250,000 metric tons per year facility. On a more optimistic note, Asarco has just reopened its shuttered Glover smelter.

DEMAND: Don't look for anything spectacular. True, totals will be better than in 1983 when U.S. usage dropped some 4% (to 1.14 million short tons)—primarily because of the lead-in-gasoline phaseout. But if all goes well a 5% increase into the 1.2 million ton range looks feasible for the year as a whole.

SUPPLY: There's more than ample capacity available—both here and abroad. But strikes could well make for some temporary tightness. Also refinery stocks have dropped considerably over the past few quarters. Secondary lead potential does offer some reassurance. Thus the 600,000 tons of domestic production currently projected for 1984 (nearly half of all projected 1984 demand) **would still leave these plants operating at only 60% of their capacities. Nor is the scrap input for these secondary facilities likely to pose any problems.**

PRICE OUTLOOK: Trends over the next few months will depend on mine and smelter labor developments. If work stoppages don't interfere, the normal seasonal slowdown could **drop prices a cent or two by June or July.** Even so, that would still leave tags well above the 21¢/lb. average of last year. **As for late 1984—a modest uptrend can't be ruled out**—with quotes moving up into the 28-30¢/lb. range—especially if forecasts calling for a significant increase in battery demand materialize.

Lead (producer price)
(Cents per pound)



Steel

Improving demand continues to push prices up closer to list levels. Midwestern distributors, for example, see sheet moving up another $20-$40/ton by July--with average discounts at that time whittled down to about $20/ton. In other product lines there's talk of (1) the complete elimination of discounts in oil country tubular goods by summer, and (2) a further $25/ton boost in h-r bars. Further increases for many products seem likely by fall.

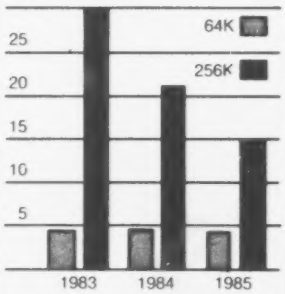
Copper

Easiness persists. On the other hand, U.S. demand continues to improve—led by water tube where sales have jumped 25% over the past six months. Japanese and European ordering is up, too—and exchange stocks continue to drift lower. All this suggests a resumption of the early spring uptrend—with quotes edging into the 85¢/lb. range by late in the year. But any bigger hike seems remote. Reason: Global production continues to creep up.

Electronic parts

Prices for 64K Dynamic RAMs seem to be leveling off in the $4.70-$4.80 range. But look for some substantial decreases in the new 256K Dynamic RAMs just now getting into volume production. Average price this year could drop close to $21 (versus $30 last year)—with a further 25-30% fall-off anticipated for 1985. On the other hand, multi-layered PC boards should continue to edge up on strong demand—with close to 10% increases seen for both this year and 1985.

Electronic components
Dynamic RAMs ($)



Petrochemicals

A mixed picture here. The second quarter 30¾¢/lb. butadiene quote has been whittled down to near 30¢/lb. Imported material is available for as low as 27½¢/lb. Meantime, only about ½-1¢/lb. of a recent ethylene boost has held—with market quotes in the 20¢/lb. range. As for propylene, producers are getting about 1¢/lb. more—with the chemical grade going for 19-19½¢/lb. More price boosts are expected for all three chemicals after midyear.

Aluminum

Markets are somewhat soft—with merchant ingot now fetching less than 70¢/lb.—some 3-4¢/lb. under month-earlier levels. And in the fabricated